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[54] HUMAN β-CASEIN, PROCESS FOR PRODUCING IT AND USE THEREOF

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[57] **ABSTRACT**

The present invention relates to a DNA sequence encoding the human milk protein β-casein or an analogue or variant thereof which has either the calcium binding activity of human β-casein, or opioid activity, or angiotensin converting enzyme (ACE) inhibitory activity, or a combination of any two or three of these activities. The DNA sequence may optionally contain one or more intron sequences and permissive RNA splice signals. The DNA sequence is used in the production of recombinant human β-casein, advantageously by means of production in transgenic non-human mammals such as bovine species. In one embodiment, the DNA sequence is inserted into a milk protein gene of a mammal such as a whey acidic protein (WAP) gene. The main use of the recombinant human β-casein is as a constituent of infant formulae. It is contemplated that the recombinant human β-casein provides a substantial improvement of the nutritional and biological value of the formulae in that a closer similarity to human milk is obtained.

7 Claims, 26 Drawing Sheets